

## SOLUTION BY HDFC ERGO

HDFC ERGO can assist you in handling flood risk. Our Risk Consulting Service can offer you a Flood Risk Review™ where our risk engineers can visit your facility. They will review your flood loss prevention preparedness and offer suggestions on managing flood risk. Based on this review, you could get further advice from our specialists for insuring the flood risk under our suite of policies designed keeping our client's requirement in mind.

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### Risk Consulting Services at HDFC ERGO General Insurance Company Limited

- § Risk Survey Report (RSR)
- § Lightning Risk Assessment Report (LRAR)
- § Post Loss/Accident Survey Report (PLSR)
- § NatCat Analysis Report (NCAR)
- § Loss Prevention Brochures

Visit following link for details and contact:

<http://www.hdfcergo.com/Commercial/RiskConsultingServices.html>.

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LOSS PREVENTION SERIES

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## INTRODUCTION

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Due to the rapid growth in Indian economy in the past decade, there has been a spurt in civil construction activity involving apartment blocks, commercial buildings, factory sheds, warehouses and the like. Many of these construction works have involved reclamation of wastelands or marshy areas, which hitherto served as “sponges”, absorbing large quantities of storm water. Massive construction has also overwhelmed existing drains, whether natural or artificial in many sites. This, coupled with unseasonal heavy rains has posed challenges of water logging in construction resulting in damages to excavated structures, construction material and equipment.

This brochure discusses some of the general mitigation measures to be adopted. These have been drawn up based on our experience in handling various flood and inundation claims involving various sites.

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## COMMON CAUSES OF FLOODING

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- § Excessive unseasonal rainfall
- § Inadequate storm water drainage (major reason)
- § Close proximity to a river or a lake, which already might have been in full capacity, and unable to receive any water drained from the site
- § Water logging and inundation

There are many approaches that can prevent flood and inundation incidents. Some measures involve passive techniques and some involve active elements like construction of dykes or walls to prevent floods.

Following are measures classified as **NON-STRUCTURAL MEASURES, STRUCTURAL MEASURES & HUMAN ELEMENT MEASURES:**

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## NON-STRUCTURAL MEASURES

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- § These measures involve natural means of absorption of flood water by increasing percolation of water into the ground. This can be achieved to some extent by harnessing the storage effect of ground, sub-soil, vegetation, etc.
- § In case of a manufacturing plant, shut off the electrical supply of electrical installations, which are likely to be affected by flood
- § In case of residential occupancies, shut off the main electrical supply to avoid short circuiting and accidents
- § In case of large warehouses in flood prone areas, consider storage at height. The approach can be towards storing high value goods at highest level
- § Always store goods on pallet to increase height

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## STRUCTURAL MEASURES

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- § Storm water drains of adequate capacity should be planned and executed
- § Open trenches and excavation works during monsoon season should be preferably avoided or covered to prevent water ingress

- § Construct barrier walls for protecting your structure from ingress of flood water
- § De-watering arrangements should be made with preferably diesel engine driven pumps with adequate stand-by, located at elevated plane to pump out storm water
- § Check structural stability of your structure before monsoon

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## HUMAN ELEMENT MEASURES

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- § In case of an alert of flood, keep all valuables such as jewellery, cash, important documents (insurance policies) at safe place
- § Keep an eye on meteorological department's alert announcements
- § In case of close proximity to dams, keep update of alerts issued by dam official
- § Keep emergency kits ready containing first aid box, torch, radio, eatables, glucose and other essential items for emergency situation
- § In case of entry of flood water in your occupancy, do not panic. Take a refuse at height and try to establish contact with disaster management authority
- § Keep all strategically important numbers (such as disaster management authority, fire brigade and close relatives) readily available
- § A written Surface Water Emergency Response Plan (SWERP) should be developed. It should include the basic components as stated below. In addition, a preventive maintenance program should be developed for the inspection and cleaning of the storm water inlets, lines, outlets and ditches that divert runoff to drain inlets or around building at least quarterly to keep them free of debris, silt, etc

**Key elements of a surface water emergency response plan include the following:**

- § **Centralized Authority:** Give one person, the authority to initiate emergency actions. Concentrating this authority is the only way to reduce confusion and eliminate unnecessary delays.
- § **Comprehensive Scope:** Include all reasonable scenarios with a designated action for each. Provide alternative actions in case the first option becomes impractical or impossible for a specific scenario.
- § **Personnel:** Provide available and sufficient resources to achieve the objectives of the plan.
- § **Salvage:** Concentrate salvage and cleanup planning on specific equipment, stock or supplies most crucial to operation or of high value.
- § **Training:** A period of several years without an emergency may cause a lapse in preparedness. Provide annual training and revise the plan to maintain preparedness.
- § **Early Warning:** Monitor the weather. Use existing forecasting networks. Weather reports for forecasts of tropical storms and severe thunderstorms are readily available on the internet or from meteorological department bulletins.
- § **Resources:** Keep needed resources accessible before the emergency. Determine what equipment and supplies are needed and where to get them before an emergency. Evaluate the need for spare pumps, sand bags and sand, squeegees, plastic tarpaulin, etc.